

CHROMOSOME COUNTS FROM NEW MEXICO AND MEXICO

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The counts reported here are the result of general collecting in New Mexico and in northern Chihuahua, Mexico (see also Ward 1983a and 1983b). Most agree with previously published counts, but a few are unique and may provide clues suggesting intraspecific chromosomal variation, and the majority of them expand the cytogeographical knowledge into this area. Cytological techniques are the same as in Ward, 1983b. Vouchers are deposited at NMC with duplicates of some also in NY, TEX, MO, or UNM. The following codes for collectors are used in the listing: RJS = Robert Soreng, RWS = Richard Spellenberg and W = Darrell Ward. All collections are from New Mexico unless otherwise stated.

ACANTHACEAE *Carlowrightia linearifolia* (Torr.) Gray. n=18. Luna Co., Cooke Range, S of Rattlesnake Canyon. RJS & W 1764.  
*Elytraria imbricata* (Vahl) Pers. n=11. Hidalgo Co., Skeleton Canyon, 2.5 km E of Arizona border. RWS 6303.

AIZOACEAE *Trianthema portulacastrum* L. n=28. Doña Ana Co., yard weed in southern Las Cruces. RWS 6233.

AMARANTHACEAE *Amaranthus hybridus* L. n=16. San Juan Co., roadside of NM-17, 25 km N of Farmington. RWS & W 6189.  
*Tidestromia lanuginosa* (Nutt.) Standl. var. *lanuginosa*. n=10. Doña Ana Co., southern Las Cruces. W 83-025. (Possible first count for the genus.)

ASTERACEAE *Artemisia frigida* Willd. n=9. San Juan Co., 5 km E of NM-17, 8 km N of La Plata. RWS, W & Collyer 6168.

*Aster frondosus* (Nutt.) Torr. & Gray. n=8. San Juan Co., 1.5 km S of Fruitland, Navajo Coal Mine. RWS & W 7570.

*Aster hesperius* Gray var. *hesperius*. n=36. San Juan Co., southern edge of Fruitland. RWS & W 7599.

*Baileya multiradiata* Harv. & Gray. n=16. Doña Ana Co., NMSU campus, Las Cruces. W 80-066.

*Brickellia scabra* (Gray) A. Nels. n=9. San Juan Co., 16 km SE of Shiprock. RWS & W 6093.

*Engelmannia pinnatifida* Torr. & Gray. n=9. Guadalupe Co., northern Santa Rosa. W, RWS & RJS 81-214.

*Erigeron bellidiastrium* Nutt. var. *bellidiastrium*. n=18. San Juan Co., 8 km N of La Plata. RWS, W & Collyer 6176.

Erigeron flagellaris Gray. n=9. Sierra Co., Black Range, Diamond Creek, 18 km W of Chloride. W & Todsen 81-178.

Erigeron neomexicanum Gray. n=9. Hidalgo Co., Peloncillo Mtns., Skeleton Canyon, 2.5 km E of Arizona border. RWS 6317.

Gaillardia pinnatifida Torr. var. pinnatifida. n=17. Lincoln Co., US-54 roadside, 19 km S of Corona. W, RWS & RJS 81-273.

Gutierrezia glutinosa (Schauer) Sch. Bip. n=8. Lincoln Co., US-54 roadside, 19 km S of Corona. W, RWS & RJS 81-282.

Heterotheca horrida (Rydb.) Harms. n=18. San Juan Co., E side of hogback, 16 km SE of Shiprock. RWS & W 6096.

Heterotheca villosa (Pursh) Shinners var. villosa. n=9. Doña Ana Co., Organ Mtns., Aguirre Springs Recreation Area. W & Arsuffi 81-156.

Hymenopappus tenuifolius Pursh. n=17. Guadalupe Co., along US-54, 1 km N of Vaughn. W, RWS & RJS 81-213; and Harding Co., NM-120 roadside, 6 km W of Roy. W, RWS & RJS 81-266a.

Hymenoxys argentea (Gray) Parker. n=15. Lincoln Co., US-54 roadside, 19 km S of Corona. W, RWS & RJS 81-283.

Machaeranthera canescens (Pursh) Gray. n=4. San Juan Co., 1.5 km S of Fruitland, Navajo Coal Mine. RWS & W 7577.

Machaeranthera tephrodes (Gray) Greene. n=4. Hidalgo Co., Peloncillo Mtns., Skeleton Canyon, 3 km E of Arizona border. RWS 6323.

Malacothrix fendleri Gray. n=7. Doña Ana Co., Faulkner Canyon, 19 km NW of Las Cruces. W & RJS 83-011.

Platyschkuhria integrifolia (Gray) Rydb. var. oblongifolia (Gray) Ellison. n=12. San Juan Co., Navajo Reservation, Navajo Coal Mine, 16 km SW of Fruitland. RWS & W 7598.

Ratibida columnifera (Nutt.) W. & S. n=14. Harding Co., Kiowa National Grasslands, 13 km W of Mills. W 81-221a.

Senecio neomexicanus Gray var. mutabilis (Greene) Barkeley. n=46. Hidalgo Co., Peloncillo Mtns., Clanton Draw. RWS 5962.

Senecio riddellii Torr. & Gray. n=20. San Juan Co., 6.5 km N of La Plata. RWS, W & Collyer 6183.

Townsendia annua Beaman. n=9. Doña Ana Co., 10 km W of Las Cruces. W & Forbes 82-005.

Townsendia formosa Greene. n=9. Otero Co., Sacramento Mtns., 8 km NE of Cloudcroft. RJS, RWS & W 2031.

Viguiera longifolia (Robins. & Greenm.) Blake. n=8. Hidalgo Co., Peloncillo Mtns., Skeleton Canyon, 2.5 km E of Arizona border. RWS 6315.

BIGNONIACEAE Tecoma stans (L.) Juss. var. angustata Rehd. n=18. MEXICO, Chihuahua, 4 km W of MEX-45, 70 km S of Cd. Juarez. W & RWS 81-326b.

BRASSICACEAE Erysimum capitatum (Dougl.) Greene. n=18. Doña Ana Co., Organ Mtns., Aguirre Springs Recreation Area. RJS & W 2111.

Nerisyrenia linearifolia (Wats.) Greene. n=8. Lincoln Co., US-54 roadside, 19 km S of Corona. W, RWS & RJS 81-285.

Thelypodium integrifolium (Nutt.) Endl. var. gracilipes Robins. n=13. San Juan Co., 6 km N of La Plata, 3.5 km E of NM-17. RWS, W & Collyer 6131.

Thelypodium integrifolium (Nutt.) Endl. var. integrifolium. n=13. Harding Co., 8 km W of Mills. W 81-261.

CACTACEAE Opuntia leptocaulis DC. n= ca. 22. MEXICO, Chihuahua, 4 km W of MEX-45, 70 km S of Cd Juarez. W & RWS 81-328

Opuntia violacea Engelm. var. violacea. n=22. Doña Ana Co., Tortugas Mtn., 3 mi E of Las Cruces. W & RWS 82-002.

COMMELINACEAE Commelina erecta L. var. angustifolia (Michx.) Fern. n=30. MEXICO, Chihuahua, 4 km W of MEX-45, 70 km S of Cd. Juarez. W & RWS 81-329.

CONVOLVULACEAE Convolvulus incanus Vahl. n=12. Harding Co., Canon Blanco, 13 km W of Roy. W. Fisher & Limerick 81-241.

Cuscuta campestris Yuncker. n=28. San Juan Co., 6 km N of La Plata along NM-17. RWS & W 6143.

Cuscuta suaveolens Seringe. n=14. Doña Ana Co., Las Cruces. W & RWS 81-167.

Ipomoea coccinea L. var. coccinea. n=15. Hidalgo Co., Peloncillo Mtns., Skeleton Canyon. RWS 6342.

CUCURBITACEAE Apodanthera undulata Gray. n=14. MEXICO, Chihuahua, 4 km W of MEX-45, 70 km S of Cd. Juarez. W & RWS 81-330. (Possible first count for the genus.)

CYPERACEAE Carex foenea Willd. n=40. Lincoln Co., White Mtns., Eagle Creek Canyon, 5.6 air km WNW of Alto. W & Arsuffi 81-092.

Eleocharis macrostachya Britt. & Small. n=8. San Juan Co., 6 km N of La Plata. RWS & W 6146.

Hemicarpha micrantha (Vahl.) Britt. var. drummondii (Nees) Friedl. n=27. Hidalgo Co., Peloncillo Mtns., Skeleton Canyon, 2.5 km E of Arizona border. RWS 6302.

EUPHORBIACEAE Croton dioicus Cav. n=14. MEXICO, Chihuahua, 2 km E of MEX-45, 3 km NE of Samalayuca. W & RWS 81-321.

Euphorbia chamaesula Boiss. n=13. Sierra Co., Black Range, Taylor Canyon beside USFS-226. W & Todsen 81-190.

Euphorbia glyptosperma Engelm. n=11. San Juan Co., Navajo Reservation, Navajo Coal Mine, Cottonwood Arroyo. RWS & W 7595.

Euphorbia marginata Pursh. n=28. Harding Co., Canon Blanco, 13 km W of Roy. W. Fisher & Limerick 81-241.

Euphorbia missurica Raf. var. intermedia (Engelm.) Whlr. n=12. San Juan Co., 6 km E of NM-17, 8 km N of La Plata. RWS, W & Collyer 6172.

FABACEAE Acacia constricta Gray. n=13. MEXICO, Chihuahua, 4 km W of MEX-45, 70 km S of Cd. Juarez. W & RWS 81-327a.

Acacia neovernicosa Isley. n=13. MEXICO, Chihuahua, E of MEX-45, 8 km N of Moctezuma. W & RWS 81-332.

Acacia schaffneri (S. Wats.) Herm. var. bravoensis Isley. n=13. MEXICO, Chihuahua, E of MEX-45, 8 km N of Moctezuma. W & RWS 81-335.

Astragalus hallii Gray var. fallax (Wats.) Barneby. n=11. Grant Co., Mogollon Mtns., USFS-147, 11 km NNW of Buckhorn. RJS & W 2142.

Astragalus praelongus Sheld. var. praelongus. n=11. Mora Co., NM-120 roadside, 10 km E of Wagon Mound. W, RWS & RJS 81-270.

Cassia roemeriana Scheele. n=14. Guadalupe Co., 15 km N of Cuervo. W, RWS & RJS 81-217.

Dalea jamesii (Torr.) Torr. & Gray. n=7. Grant Co., Mogollon Mtns., USFS-147, 11 km NNW of Buckhorn. RJS & W 2139.

Lotus humistratus Greene. n=7. Grant Co., Mogollon Mtns., Little Dry Creek, 16 km SE of Glenwood. RJS & W 2136.

Lupinus laetus W. & S. n=24. Lincoln Co., 13 km SSW of Cloudcroft along USFS-64. W & Weems 83-021

Rhynchosia texana Torr. & Gray. n=ca. 11. Catron Co., Mogollon Mtns., Sheridan Gulch, 10 km SE of Glenwood. RJS & W 2127. All meiotic chromosomes sets seen had extreme stickiness.

Vicia exigua Nutt. ex Torr. & Gray. n=7. Doña Ana Co., Organ Mtns., 18 km E of Las Cruces. W & RJS 82-008a.

GENTIANACEAE Centauryum texense (Griseb.) Fernald. n=21. Otero Co., White Sands National Monument. RJS & RWS 2107

GERANIACEAE Geranium caespitosum Jones. n=26. Doña Ana Co., Organ Mtns., Aguirre Springs Recreation Area. W & Arsuffi 81-157.

HYDROPHYLACEAE Eucrypta micrantha (Torr.) Heller. n=6. Doña Ana Co., Robledo Mtn., 17 km NNW of Las Cruces. W & RJS 83-002.

Nama hispidum Gray var. mentzelii Brand. n=7. MEXICO, Chihuahua, 65 km N of Cd. Chihuahua. W & RWS 81-343.

Phacelia bombycina W. & S. n=11. Grant Co., Mangas Springs, 23 km NW of Silver City. W & Salazar 82-011.

LAMIACEAE Monarda menthaefolia Graham. n=18. Lincoln Co., White Mtns., 5 km WNW of Alto. W, RWS & RJS 82-036.

Salvia henryi Gray. n=14. NM, Doña Ana Co., N end of Robledo Mtn., 18 km NW of Las Cruces. RWS & RJS 7007.

LILIACEAE Allium cernuum Roth var. obtusum Cocke. n=7. Lincoln Co., White Mtns., 5 km WNW of Alto. W, RWS & RJS 82-037.

Allium macropetalum Rydb. n=7. Doña Ana Co., Organ Mtns., 21 km E of Las Cruces. RWS & Singer 5956.

LINACEAE Linum aristatum Engelm. n=15. MEXICO, Chihuahua, 1 km E of MEX-45, 3 km NE of Samalayuca. W & RWS 81-323.

Linum puberulum (Engelm.) Heller. n=16. San Juan Co., 8 km N of La Plata. RWS, W & Collyer 6171.

LOASACEAE *Mentzelia pumila* (Nutt.) Torr. & Gray. var. *pumila*. n=9. Lincoln Co., US-54 roadside, 19 km S of Corona. W, RWS & RJS 81-285.

MALVACEAE *Abutilon sonorae* Gray. n=7. Hidalgo Co., Peloncillo Mtns., Skeleton Canyon, 2.5 km E of Arizona border. RWS 6294. *Sida abutifolia* Müller. n=7. MEXICO, Chihuahua, just E of MEX-45, 5 km N of El Sueco. W & RWS 81-339; and Doña Ana Co., US-70 roadside, 1 km W of Organ. RWS & RJS 6200. (This second report is a correction (brought to attention by P. Fryxell, personal communication) of information listed as *Sida filicaulis* in Ward, 1983b. Chromosomal stickiness made determination uncertain.)

*Sphaeralcea coccinea* (Pursh) Rydb. var. *elata* (Baker f.) Kearney. n=10. Grant Co., Mangas Springs, 29 km NW of Silver City beside US-180. RJS & W 2115.

*Sphaeralcea digitata* (Greene) Rydb. var. *digitata*. n=5. Doña Ana Co., northern end of Robledo Mtn., 18 km NW of Las Cruces. RWS & RJS 7010.

*Sphaeralcea laxa* W. & S. n=10. Catron Co., Mogollon Mtns., 10 km SE of Glenwood. RJS & W 2122.

*Sphaeralcea leptophylla* (Gray) Rydb. n=10. Grant Co., City of Rocks State Park, 30 km NW of Deming. RJS & W 2154.

OROBANCHACEAE *Conopholis mexicana* Gray. n=20. Lincoln Co., White Mtns., northern Ruidoso. W 82-034.

PLANTAGINACEAE *Plantago purshii* R. & S. var. *picta* (Morris) Pilg. n=6. Hidalgo Co., Peloncillo Mtns., Geronimo Trail road 2.5 km W of junction with NM-338. RWS 5961.

POLEMONIACEAE *Gilia ophthalmoides* Brand var. *australis* A. & V. Grant. n=18. Doña Ana Co., Lookout Peak, 17 km N of Las Cruces. RWS & RJS 7008; and 18 km NNW of Las Cruces. W & RJS 83-004.

*Gilia subnuda* Torr. ssp. *subnuda*. n=9. San Juan Co., 6.5 km N of La Plata, 1 km W of NM-17. RWS, W & Collyer 6137.

*Ipomopsis longiflora* (Torr.) V. Grant. n=7. Lincoln Co., US-54 roadside, 34 km S of Carrizozo. W, RWS & RJS 81-209; and San Juan Co., 6 km N of La Plata. RWS & W 6155.

*Polemonium foliosissimum* Gray var. *foliosissimum* (Gray) Anway. n=9. Lincoln Co., White Mtns., Eagle Creek Canyon, 5.5 km WNW of Alto. W et al. 81-204.

POLYGONACEAE *Eriogonum hookeri* S. Watson. n=20. San Juan Co., Navajo Reservation, Navajo Coal Mine, Cottonwood Arroyo. RWS & W 7596.

*Eriogonum scabrellum* Reveal. n=20. San Juan Co., Navajo Reservation, Navajo Coal Mine. RWS & W 7594.

RHAMNACEAE *Condalia warnockii* Johnston. n=24. MEXICO, Chihuahua, 3 km S of Samalayuca, 1 km E of MEX-45. W & RWS 81-324.

RUBIACEAE *Hedyotis nigricans* (Lam.) Fosb. var. *rigidiuscula* (Gray) Shinners. n=11. Guadalupe Co., 1 km N of Vaughn. RWS, RJS & W 6076; and W, RWS & RJS 81-212.

RUTACEAE *Thamnosma texana* (Gray) Torr. n=9. Doña Ana Co., Robledo Mtn., 18 km NNW of Las Cruces. W & RJS 83-019. (Possible first count for the genus.)

SAXIFRAGACEAE *Fendlerella utahensis* (Wats.) Heller. n=13. MEXICO, Chihuahua, N end of Sierras de las Candelarias, 70 km S of Cd. Juarez. RWS 6089.

SCROPHULARIACEAE *Castilleja integra* Gray. n=24. Hidalgo Co., Peloncillo Mtns., Clanton Canyon, 4 km E of NM-AZ border. W & Salazar 82-026.

Castilleja mexicana Hemsl. n=12. MEXICO, Chihuahua, 50 km N of Cd. Chihuahua, just W of MEX-45. W & Worthington 81-347.

Maurandya wislizenii Engelm. n=12. MEXICO, Chihuahua, 2 km E of MEX-45, 3 km NE of Samalayuca. W & RWS 81-320.

Mimulus glabratus H.B.K. n=30. Grant Co., Mangas Spring, 27 km NW of Silver City. W and Salazar 82-013.

Mimulus guttatus D.C. n=14. Doña Ana Co., Organ Mtns, 18 km E of Las Cruces. W & RJS 82-008.

Penstemon ambiguus Torr. n=8. Luna Co., US-70 roadside, 2 km E of Akela. RWS 6350.

Penstemon barbatus (Cav.) Roth ssp. *torreyi* (Benth.) Keck. n=8. Harding Co., grasslands, 8 km W of Mills. W et al. 81-255.

VALERIANACEAE *Valeriana arizonica* Gray. n=8. Lincoln Co., Eagle Creek Canyon, 6.4 km WNW of Alto. W et al. 81-028.

Valeriana edulis Nutt. n=32. Lincoln Co., White Mtns., Eagle Creek Canyon, 11 km NW of Ruidoso. RJS, RWS & W 2029, and Karr Canyon, 10 km SW of Cloudcroft. W & Weems 83-022.

VERBENACEAE *Verbena bracteata* Lag. & Rodr. n=7. Guadalupe Co., limestone bluffs, 0.8 km N of Vaughn. W, RWS & RJS 81-210.

Verbena perennis Wooton. n=7. Guadalupe Co., limestone bluffs, 0.8 km N of Vaughn. RWS, RJS & W 6077.

ZYGOPHYLLACEAE *Peganum mexicanum* Gray. n=12. MEXICO, Chihuahua, justE of MEX-45, 16 km S of Villa Ahumada. W & RWS 81-331.

#### LITERATURE CITED

Ward, D. 1983a. IN Love, A. IOPB Chromosome Number Reports - LXXX. Taxon 32(3): 510-511.

Ward, D. 1983b. Chromosome counts from New Mexico and southern Colorado. Phytologia 54: 302-308.